

Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of

Service Rules for Advanced Wireless Services
in the 1.7 GHz and 2.1 GHz Bands

WT Docket No. 02-353

REPORT AND ORDER

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By the Commission: Chairman Powell, Commissioners Martin and Adelstein issuing separate statements;
Commissioner Copps approving in part, concurring in part and issuing a separate statement.

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I. INTRODUCTION

1. In this Report and Order, we adopt service rules for Advanced Wireless Services (AWS) in the 1710-1755 and 2110-2155 MHz bands, including provisions for application, licensing, operating and technical rules, and for competitive bidding.¹ Licensees in these bands will have the

¹ AWS is the collective term the Commission uses for new and advanced wireless applications, such as voice, data and broadband services provided over a variety of high-speed fixed and mobile networks, and which are popularly referred to as International Mobile Telecommunications-2000 (IMT-2000) or "third generation" (3G) systems. The "3G" nomenclature is based on the popular view that analog cellular systems represent the first generation of advanced wireless devices, that digital cellular and broadband Personal Communications Service systems represent the second, and that the next deployment of wireless technologies (which we include in the collective term "AWS") represents the third generation. The characteristics of IMT-2000/3G systems are described more fully in SPECTRUM STUDY OF THE 2500-2690 MHz BAND, FINAL REPORT, at 7-10 (OET/MMB/WTB/IB, Mar. 30, 2001) (*FCC Final Spectrum Study*). A copy of this report has been placed in the docket file of ET Docket No. 00-258, and is available on the Internet at <<http://www.fcc.gov/3G>>.

flexibility to provide any fixed or mobile service that is consistent with the allocations for this spectrum.² We will license this spectrum under our market-oriented Part 27 rules and, in order to accommodate differing needs, our band plan includes both localized and regional geographic service areas and symmetrically paired spectrum blocks with the pairings being composed of different bandwidths. Our licensing plan will allow the marketplace rather than the Commission to ultimately determine what services are offered in this spectrum and what technologies are utilized to provide these services. The licensing framework that we adopt today for these bands will ensure that this spectrum is efficiently utilized and will foster the development of new and innovative technologies and services, as well as encourage the growth and development of broadband services.

2. Our actions today bring us closer to our goals of achieving the universal availability of broadband access and increasing competition in the provision of such broadband services both in terms of the types of services offered and in the technologies utilized to provide those services. The wide spread deployment of broadband will bring new services to consumers, stimulate economic activity, improve national productivity, and advance many other objectives – such as improving education, and advancing economic opportunity for more Americans. By encouraging the growth and development of broadband, our actions today also foster the development of facilities-based competition. We achieve these objectives by taking a market-oriented approach to licensing this spectrum that provides greater certainty, minimal regulatory intervention, and leads to greater benefits to consumers.

II. BACKGROUND

3. The 1710-1755 and 2110-2155 MHz bands have previously been used for a variety of Government and non-Government services. The National Telecommunications and Information Administration (NTIA) identified the 1710-1755 MHz band for transfer from exclusive use by the Federal Government to the Commission for mixed use, effective in 2004, pursuant to the Omnibus Budget Reconciliation Act of 1993 (OBRA-93).³ The 2110-2150 MHz band was formerly used by private and common carrier fixed microwave services, but in 1992 was identified by the Commission for reallocation to services using new and innovative technologies under its *Emerging Technologies* proceeding.⁴ The 2150-2155 MHz band is currently used by the Multipoint Distribution Service (MDS).

² The service rules that we adopt today for this spectrum build on the policy objectives set forth in the *Spectrum Policy Task Force Report*. Spectrum Policy Task Force, ET Docket No. 02-135, *Report* (rel. Nov. 15, 2002) (*Spectrum Policy Task Force Report*).

³ Spectrum Reallocation Final Report, Response to Title VI – Omnibus Budget Reconciliation Act of 1993, NTIA Special Publication 95-32 (Feb. 1995) (*1995 Reallocation Final Report*); see also Omnibus Budget Reconciliation Act of 1993, Pub. L. No. 103-66, 107 Stat. 312 (1993) (OBRA-93). Under OBRA-93, “mixed use” means that some of the spectrum transferred from exclusive Government use can be partially retained for use by Federal Government stations. See 47 U.S.C. § 923(b)(2).

⁴ See generally *Redevelopment of Spectrum to Encourage the Establishment of Services Using New and Innovative Technologies*, ET Docket No. 92-9, *First Report and Order and Third Notice of Proposed Rule Making*, 7 FCC Rcd 6886 (1992); *Second Report and Order*, 8 FCC Rcd 6495 (1993); *Third Report and Order and Memorandum Opinion and Order*, 8 FCC Rcd 6589 (1993); *Memorandum Opinion and Order*, 9 FCC Rcd 1943 (1994); *Second Memorandum Opinion and Order*, 9 FCC Rcd 7797 (1994), *aff’d*, *Association of Public Safety Communications Officials-International, Inc. v. FCC*, 76 F.3d 395 (D.C. Cir. 1996) (collectively, “*Emerging Technologies proceeding*”).

A. AWS Allocation Order

4. In November of last year, we adopted a *Second Report and Order* in ET Docket No. 00-258 that allocated spectrum for advanced services in the 1710-1755, 2110-2150 and 2150-2155 MHz bands and combined these latter two bands into a single 45-megahertz allocation (i.e., 2110-2155 MHz).⁵ Specifically, in the *AWS Allocation Order*, we allocated the 1710-1755 MHz band for fixed and mobile services on a co-primary basis contingent on the spectrum becoming available for mixed use by January 1, 2004. The 2110-2150 MHz band was already allocated to the fixed and mobile services on a primary basis. In order to create a second contiguous 45-megahertz band for advanced services, we added five megahertz of spectrum to the 2110-2150 MHz band from the upper adjacent band.⁶ We reallocated the 2150-2155 MHz band from MDS, added a mobile allocation to this segment, and combined it with the 2110-2150 MHz band. As a result, we created two contiguous 45-megahertz bands, both allocated to the fixed and mobile services, and made this spectrum available for AWS.

5. By providing two 45-megahertz blocks of contiguous spectrum that could be paired, we allocated a significant amount of spectrum that can be used to support a wide variety of AWS applications, including though not limited to those associated with "3G" and "IMT-2000" technologies. In keeping with our flexible use policies, this allocation could be used by current service providers to expand their capacity for offering wireless voice and data services. Alternatively, it could be used by either current providers or new entrants to support the development of entirely new applications that are distinct from existing wireless offerings.

6. Before these bands can be put to effective use, however, incumbent licensees in these bands must be relocated to other spectrum. The 1710-1755 MHz band is currently used for Federal Government operations. As indicated above, NTIA originally identified the 1710-1755 MHz band for transfer in 1995 and indicated that the band could be made available to non-Federal Government users on a mixed-use basis in 2004.⁷ NTIA noted, however, that Federal Government use of this band would have to be protected indefinitely at 333 fixed microwave stations used by Federal Power Agencies, at 111 stations used for aviation-related safety communications, and at 16 sites used by Department of Defense for fixed microwave, tactical radio relay, and aeronautical mobile stations.⁸

7. In July 2002, NTIA offered a plan that, if fully implemented, could largely clear this band of Federal Government users by no later than December 31, 2008.⁹ The plan indicates that in order

⁵ Amendment of Part 2 of the Commission's Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, including Third Generation Wireless Systems, ET Docket No. 00-258, *Second Report and Order*, 17 FCC Rcd 23193 (2002) (*AWS Allocation Order*), *recons pending*.

⁶ This spectrum was part of a 10-megahertz block (12 megahertz in the top fifty markets) that was allocated to MDS in the 2150-2160/2162 MHz band. MDS stations licensed after 1992 to use the 2160-2162 MHz band are on a secondary basis.

⁷ 1995 *Reallocation Final Report*, *supra* n.3.

⁸ *Id.* at App. E and p. F-4.

⁹ U.S. Department of Commerce, National Telecommunications and Information Administration, "An Assessment of the Viability of Accommodating Advanced Mobile Wireless (3G) Systems in the 1710-1770 MHz and 2110-2170 MHz Bands," *Report*, at 2-4, rel. July 22, 2002 (*NTIA AWS Assessment*). The Commission sought comment on the *NTIA AWS Assessment*. FCC Seeks Comment On The National Telecommunications and Information Administration's Report, *An Assessment Of The Viability Of Accommodating Advanced Mobile Wireless (3G) Systems In The 1710-1770 MHz and 2110-2170 MHz Bands*, ET Docket No. 00-258, *Public Notice*, (continued....)

for the time line to be achieved certain actions would be required to be accomplished.¹⁰ Any significant delays in the availability of relocation funds or delays in the other assumptions upon which the December 31, 2008 clearance date is based could require the predicted clearance time line to be revised.¹¹ Along with requiring commercial users to reimburse Federal users' relocation costs, part of this plan requires the Commission to conduct a rulemaking that would reallocate other spectrum to accommodate Federal systems that otherwise would remain in the 1710-1755 MHz band indefinitely. We initiated this rulemaking proceeding with the issuance of a *Fourth Notice of Proposed Rulemaking* in ET Docket No. 00-258 this past July.¹²

8. As discussed above, we created the 2110-2155 MHz band by combining two adjacent band segments. The 2110-2150 MHz segment of this band is currently used by incumbent point-to-point fixed microwave licensees. In the *AWS Allocation Order*, we stated that we will use existing relocation rules to provide for the migration of these licensees to other spectrum.¹³ The 2150-2155 MHz segment of the 2110-2155 MHz band is currently used by MDS, and we are considering relocation spectrum and procedures for MDS operations in this band in another proceeding.¹⁴

B. AWS Service Rules NPRM

9. Concurrently with adoption of the *AWS Allocation Order*, we also adopted a *Notice of Proposed Rulemaking* in WT Docket No. 02-353 that sought comment on licensing, technical and operational rules to govern the use of the 1710-1755 and 2110-2155 MHz bands.¹⁵ In the *AWS Service Rules NPRM*, we proposed licensing and service rules that would permit maximum licensee flexibility and sought to remove regulatory barriers to innovation. Consistent with this approach, we proposed that the 1710-1755 and 2110-2155 MHz bands could be used to provide any service, including AWS, that is consistent with the bands' fixed and mobile allocations. We proposed to license these bands under Part 27 of the Commission's rules. Part 27 provides a flexible regulatory framework that we have applied to multiple bands and services, which includes basic licensing requirements and sets out certain technical requirements to prevent interference. We also proposed to assign licenses in these

(Continued from previous page)

17 FCC Rcd 14390 (2002). The *NTIA AWS Assessment* was incorporated into Amendment of Part 2 of the Commission's Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, Including Third Generation Wireless Systems, *Fourth Notice of Proposed Rulemaking*, ET Docket No. 00-258, 18 FCC Rcd 13235 (2003).

¹⁰ *NTIA AWS Assessment* at 2.

¹¹ *Id.* at 2-4 (detailing the assumptions upon which NTIA predicted clearance by December 31, 2008).

¹² Amendment of Part 2 of the Commission's Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, Including Third Generation Wireless Systems, ET Docket No. 00-258, *Fourth Notice of Proposed Rulemaking*, 18 FCC Rcd 13235 (2003).

¹³ *AWS Allocation Order*, 17 FCC Rcd at 23215 ¶ 46.

¹⁴ See *AWS Allocation Order*, 17 FCC Rcd at 23212-13 ¶ 41; see also Amendment of Part 2 of the Commission's Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, Including Third Generation Wireless Systems, ET Docket No. 00-258, *Third Report and Order, Third Notice of Proposed Rulemaking and Second Memorandum Opinion and Order*, 18 FCC Rcd 2223 (2003); Amendment of Parts 1, 21, 73, 74 and 101 of the Commission's Rules to Facilitate the Use of the Universal Licensing System in the 2150-2162 and 2500-2690 MHz Bands, WT Docket No. 03-66, *Notice of Proposed Rule Making and Memorandum Opinion and Order*, 18 FCC Rcd 6722 (2003).

¹⁵ Service Rules for Advanced Wireless Services in the 1.7 GHz and 2.1 GHz Bands, WT Docket No. 02-353, *Notice of Proposed Rulemaking*, 17 FCC Rcd 24135 (2002) (*AWS Service Rules NPRM*).

bands through competitive bidding and sought comment on a number of auction-related issues, including the use of bidding credits, in connection with these licensing procedures.

10. In addition, we asked what geographic areas should be used to license this spectrum, whether the bands should be divided into particular blocks of spectrum, and, if so, what size the blocks should be and what pairings would be appropriate for this spectrum. Among other proposals, we proposed ten-year license terms, proposed to permit post-auction disaggregation and partitioning, and sought comment on possible construction requirements. We also sought comment on a variety of technical issues, including on how best to control in-band and out-of-band interference, appropriate power limits, RF safety limits, and Canadian and Mexican coordination.

11. Comments on the *AWS Service Rules NPRM* were due by February 7, 2003, and reply comments were due by March 14, 2003. Eighteen comments and eight reply comments were filed in response to the *AWS Service Rules NPRM*. A list of commenters and reply commenters can be found in Appendix A. In addition, as permitted under our rules, there have been *ex parte* presentations.

III. DISCUSSION

A. In General

1. Flexible Use

12. *Background:* In the *AWS Service Rules NPRM*, we proposed to allow licensees in the 1710-1755 and 2110-2155 MHz bands flexibility to provide any fixed or mobile or combination of fixed and mobile services permitted by the United States Table of Frequency Allocations. We concluded that this approach was consistent with Section 303(y)(2) of the Communications Act, as amended by the Balanced Budget Act of 1997, which grants the Commission authority to permit flexible use of spectrum if it finds that such use: (1) is in the public interest; (2) would not deter investment in communications services and systems, or technology development; and (3) would not result in harmful interference among users.¹⁶ We sought comment on our tentative conclusion to permit flexible use of this spectrum.

13. *Discussion:* In order to promote innovative services and encourage the flexible and efficient use of the 1710-1755 and 2110-2155 MHz bands, we permit licensees to use this spectrum for any use permitted by the United States Table of Frequency Allocations contained in Part 2 of our rules (*i.e.*, fixed or mobile services). All of the comments we received on this issue support permitting flexible use of this spectrum.¹⁷ CTIA states "flexibility in spectrum regulation can improve access to spectrum, promote efficiency and allow spectrum to migrate to the most highly-valued uses."¹⁸ Cingular observes that "[l]icensees need flexibility to deploy new technologies, implement service innovations, expand capacity in response to growing demand, and otherwise respond to market forces."¹⁹ PetroCom states that flexibility gives "licensees the freedom to determine the services the public desires."²⁰ Flexibility thus allows spectrum to move to its highest valued use without

¹⁶ Balanced Budget Act of 1997, Pub. L. No. 105-33, 111 Stat. 251 (1997) (BBA-97); 47 U.S.C. § 303(y); see *AWS Service Rules NPRM*, 17 FCC Rcd 24135, 24140-41 ¶ 12.

¹⁷ CTIA Comments at 2-3; Ericsson Comments at 2; Nokia Comments at 1; PetroCom Comments at 6-8; Cingular Reply Comments at 3-4; TDD Coalition Reply Comments at 2-5.

¹⁸ CTIA Comments at 2.

¹⁹ Cingular Reply Comments at 3.

²⁰ PetroCom Comments at 7.

regulatory lag, an economically efficient result.²¹ Given the expected use of the 1710-1755 and 2110-2155 MHz bands, permitting flexible use of these bands is clearly in the public interest.

14. In fact, we believe flexibility will spur investment in communication services and systems and technology development. We find that permitting licensees to use this spectrum for any use permitted by the spectrum's allocation will not deter investment in communications services and systems, or technology development. The record in this proceeding supports this determination. Ericsson states that flexibility "is imperative to ensure the successful development and deployment of AWS."²² CTIA observes that flexibility "fosters the development of innovative, state-of-the-art service offerings."²³ Cingular asserts that flexibility permits licensees "to deploy new technologies, implement service innovations, expand capacity in response to growing demand, and otherwise respond to market forces."²⁴ Our experience with licensing the Personal Communications Services (PCS) bands, flexibility has encouraged industry investment, promoted competition, and fostered technology innovations. We believe, as PetroCom observes, that flexibility "will promote investment in different technologies . . ."²⁵

15. We also find that permitting licensees to employ this spectrum for any fixed or mobile use permitted by the United States Table of Frequency Allocations will not result in harmful interference among spectrum users. The technical rules we adopt below reflect careful consideration of potential interference scenarios, both during the transition period before incumbents relocate and as the spectrum becomes developed.²⁶ Further, potential for interference between different services and technologies is mitigated by our decision to adopt geographic area licensing and a band plan that takes interference considerations into account. Finally, the flexibility we are permitting will itself provide licensees the ability to adjust their operations to minimize any interference that might occur. As the TDD Coalition states, "flexibility in choosing various technologies for spectrum allocation will negate any significant potential interference that occurs when differing technologies are permitted to co-locate within the same spectrum band."²⁷ Our technical rules for the 1710-1755 and 2110-2155 MHz bands will therefore permit licensees to provide a wide variety of services in these bands with a minimum of interference, and will permit both in-band and adjacent band licensees to operate with sufficient certainty and clarity regarding their rights and responsibilities.²⁸ In this case, licensees will

²¹ The *Spectrum Policy Task Force Report* found that "[f]lexibility enables spectrum users to make fundamental choices about how they will use spectrum (including whether to use it or transfer their usage rights to others), taking into account market factors such as consumer demand, availability of technology, and competition." *Spectrum Policy Task Force Report* at 16.

²² Ericsson Comments at 2.

²³ CTIA Comments at 3.

²⁴ Cingular Reply Comments at 3.

²⁵ PetroCom Comments at 7.

²⁶ The *Spectrum Policy Task Force Report* cautioned that clear technical rules (e.g., power limits, interference standards) are necessary in order to facilitate the co-existence of multiple spectrum uses in common and adjacent bands. *Spectrum Policy Task Force Report* at 16; see also Nokia Comments at 1.

²⁷ TDD Coalition Reply Comments at 4-5.

²⁸ See Verizon Wireless Comments at 1-3; Cingular Reply Comments at 1-3.

be able to provide any service that is consistent with the spectrum's allocation and the operating and technical rules.²⁹

2. Regulatory Framework

16. *Background:* In the *AWS Service Rules NPRM*, we proposed to license the 1710-1755 and 2110-2155 MHz bands under Part 27 of the Commission's rules.³⁰ We reasoned that the flexibility that these rules provide is consistent with our proposal that licensees in these bands could use this spectrum for any service consistent with the bands' fixed and mobile allocations. Alternatively, we sought comment on whether the bands should be licensed under Parts 22, 24, some other rule part, or a newly created rule part.

17. *Discussion:* We will license the 1710-1755 and 2110-2155 MHz bands under Part 27 of the Commission's rules, as those rules are modified below to reflect certain characteristics of this spectrum. Our Part 27 rules reflect a market oriented approach to licensing, and the flexibility these rules provide will encourage the deployment of a wide variety of fixed and mobile services in these bands. We agree with the TDD Coalition that "Part 27 is sufficient to govern these bands due to its flexible nature, and the fact that it was created for miscellaneous wireless services, and their interoperability."³¹ We note, however, that as with other Part 27 licensees, licensees in these bands will be required to comply with rules of general applicability contained in other parts of the Commission's rules.³²

18. AT&T Wireless, Cingular, CTIA, Ericsson, Motorola, and Verizon Wireless oppose licensing this spectrum under Part 27. They argue that the bands should be licensed under Part 24 of the Commission's rules, which was used to license broadband and narrowband PCS.³³ These commenters state that this spectrum will be used for services similar to services already being offered in the PCS bands. They assert that applying the same regulatory framework to both the PCS and AWS bands will avoid imposing disparate regulatory and technical requirements on carriers offering the same or similar advanced wireless services in both bands.

19. We disagree with the assertion that these bands should be licensed under the Commission's Part 24 rules. While both Part 27 and Part 24 provide substantial flexibility, our Part 24 rules are service-specific and focus exclusively on PCS, whereas our Part 27 rules provide a broader and more flexible regulatory framework that has been applied to different services in multiple spectrum bands (*i.e.*, the upper and lower 700 MHz bands and the 2.3 GHz band).³⁴ There are also several differences between the two rules parts that provide slightly greater flexibility to Part 27 licensees. For example, the Part 24 rules permit fixed and mobile services, while the Part 27 rules

²⁹ The *Spectrum Policy Task Force Report* recommended that our approach to licensing should be to allow licensees to do anything not explicitly prohibited by the Communications Act, the Commission's rules, Commission orders, licenses or authorizations. *Spectrum Policy Task Force Report* at 18.

³⁰ *AWS Service Rules NPRM*, 17 FCC Rcd at 24141 ¶ 13.

³¹ TDD Coalition Reply Comments at 5.

³² 47 C.F.R. § 27.3; *see infra* ¶¶ 84-86.

³³ AT&T Wireless Comments at 9-11; CTIA Comments at 3-4; Ericsson Comments at 2, 10; Motorola Comments at 3-5; Verizon Wireless Comments at 3; Cingular Reply Comments at 4-5; Motorola Reply Comments at 5.

³⁴ Compare 47 C.F.R. § 24.1 with 47 C.F.R. § 27.1.

permit any service consistent with a band's allocation.³⁵ Part 27 is also more flexible in terms of build out requirements, and indeed many commenters supporting Part 24 regulation actually advocate that we apply more flexible build out requirements like those in Part 27.³⁶

20. Based on these considerations, we regard Part 27 as more suitable than Part 24 for regulation and licensing of new spectrum to which we intend to apply flexible, market-oriented rules. We do not believe that proponents of Part 24 licensing will be disadvantaged by licensing these bands under Part 27 and, in fact, we see benefits to licensing this spectrum under Part 27. The Part 27 rules are designed to promote flexibility and permit market forces rather than the Commission to determine what services are offered in the spectrum licensed under this rule part. Hence, the Part 27 rules permit a licensee to provide any services for which its frequency bands are allocated.³⁷ This light-handed regulatory approach means that licensees in the 1710-1755 and 2110-2155 MHz bands will not be restricted to providing Commission-defined services. Spectrum licensed under Part 27 can be used in a multiple of ways by the same or different licensees, and the spectrum can be put to different uses across the country. As a result, the marketplace rather than the Commission will determine how this spectrum is to be used, and this should not only encourage research and investment but also spur the development and deployment of innovative services to consumers. Licensing this spectrum under Part 27 also means that licensees in these bands will be free to change the services they provide and the technologies that they utilize as market conditions change.³⁸

21. In addition, the technical requirements that we adopt below are consistent with the technical requirements for broadband PCS, and therefore PCS licensees who acquire spectrum in the 1710-1755 and 2110-2155 MHz bands will not be subject to disparate treatment. For example, we adopt the same out-of-band emission limits for AWS transmitters that are currently used for broadband PCS.³⁹ As a result, only a minimum amount of design modification will be needed by PCS equipment manufacturers in producing AWS equipment.

3. Assignment of Licenses

22. *Background:* In the *AWS Service Rules NPRM*, we acknowledged that Section 3002 of the Balanced Budget Act of 1997 requires the Commission to assign certain spectrum, including the majority of the AWS bands, through competitive bidding.⁴⁰ We recognized, however, that one portion of the AWS bands -- 2150-2155 MHz -- is not subject to a band specific directive to assign by competitive bidding.⁴¹ We noted that the 2150-2155 MHz band was only subject to the general section 309(j) requirement that the Commission assign licenses through the use of competitive bidding when mutually exclusive applications for initial licenses are accepted for filing, unless certain specific statutory exemptions apply.⁴² We also tentatively concluded that it serves the public interest to assign

³⁵ Compare 47 C.F.R. § 24.3 with 47 C.F.R. § 27.2(a).

³⁶ See *infra* ¶¶ 73-79; see also Verizon Wireless Comments at 3-4.

³⁷ 47 C.F.R. § 27.2(a).

³⁸ See *infra* ¶¶ 84-86 (discussing other rule parts that may apply to licensees in the 1710-1755 and 2110-2155 MHz bands).

³⁹ See *infra* ¶¶ 92-94.

⁴⁰ *AWS Service Rules NPRM*, 17 FCC Rcd at 24141-42 ¶ 15 (citing Balanced Budget Act of 1997, Pub. L. No. 105-33, 111 Stat. 251, § 3002(b), (c)(1)(D), (c)(3)).

⁴¹ *Id.*

⁴² *Id.*

licenses for all portions of the AWS bands by the same mechanism.⁴³ Consequently, we explained that if we adopt a licensing scheme for all portions of the AWS bands that permits the filing of mutually exclusive applications, consistent with both statutory obligations, we would resolve such applications through competitive bidding.⁴⁴ However, we also sought comment on other approaches to assign licenses that include the 2150-2155 MHz portion of the AWS bands.⁴⁵ In suggesting other approaches, commenters were requested to use the analytical framework established in the *BBA Report and Order* regarding the Commission's exercise of its 309(j) auction authority.⁴⁶

23. *Discussion:* One commenter supports our tentative conclusion to assign all portions of the AWS bands by the same mechanism.⁴⁷ Other commenters also generally concur that, to the extent that we adopt a licensing scheme that permits the filing of mutually exclusive applications, consistent with statutory obligations, we should resolve such applications through competitive bidding.⁴⁸ In addition, most commenters agree with our proposal to adopt a geographic area licensing scheme for the 1710-1755 and 2110-2155 MHz bands.⁴⁹ However, two commenters believe that we should assign licenses through other mechanisms or that the Commission should not utilize competitive bidding.⁵⁰

24. Specifically, one commenter, Mizelle, urges the Commission to adopt an application process coupled with yearly fees based upon gross revenue.⁵¹ Another commenter, Goldstein, requests that the Commission offer licenses to "eligible local exchange carriers" in rural areas and not subject such licenses to competitive bidding.⁵² Both commenters fail to explain how their proposals would comply with the Commission's statutory obligations under Section 3002 of the Balanced

⁴³ *Id.*

⁴⁴ 47 U.S.C. § 309(j).

⁴⁵ *AWS Service Rules NPRM*, 17 FCC Rcd at 24141-42 ¶ 15.

⁴⁶ See Implementation of Sections 309(j) and 337 of the Communications Act of 1934 as Amended, WT Docket No. 99-87, *Report and Order and Further Notice of Proposed Rule Making*, 15 FCC Rcd 22709, 22717-35 ¶¶ 18-50 (1999) (*BBA Report and Order*). Section 309(j)(2) exempts from competitive bidding licenses and construction permits for public safety radio services, digital television service licenses and permits given to existing terrestrial broadcast licensees to replace their analog television service licenses, and licenses and construction permits for noncommercial educational broadcast stations and public broadcast stations described in section 397(6) of the Communications Act. 47 U.S.C. § 309(j)(2). Section 647 of the Open-Market Reorganization for the Betterment of International Telecommunications Act prohibits the Commission from employing competitive bidding to assign spectrum or orbital locations used for the provision of international or global satellite communications services. Pub. L. No. 106-180, 114 Stat. 48 § 647. In this instance, because there is no broadcast or satellite allocation, the noncommercial educational broadcast station and Orbit Act exemptions are plainly inapplicable. Similarly, because we have not designated the 1710-1755 and 2110-2155 MHz bands as public safety radio service spectrum, the public safety radio services exemption does not apply.

⁴⁷ See TDD Coalition Reply Comments at 1.

⁴⁸ See, e.g., CTIA Comments at 15 (supporting the Commission's tentative conclusion to license the AWS bands through competitive bidding pursuant to Section 309(j) of the Communications Act); Cingular Reply Comments at 1.

⁴⁹ See *infra* ¶ 30.

⁵⁰ See, e.g., Mizelle Comments at 1-2; Goldstein Comments at 1; see also RCA Comments at 2 (arguing that the use of auctions "inherently favors entities with access to money from the public markets").

⁵¹ Mizelle Comments at 1-2.

⁵² Goldstein Comments at 1.

Budget Act of 1997 and Section 309(j) of the Communications Act.⁵³ We note that neither Mizelle nor Goldstein specified whether they were addressing all portions of the AWS bands or the 2150-2155 MHz band. In addition, they also fail to address basic questions that would arise when contemplating an alternative mechanism for assigning licenses. For example, Mizelle fails to indicate how the Commission might choose between mutually exclusive applicants under its proposal. Goldstein's proposal is also flawed because there is no indication of the circumstances under which a local exchange carrier would be eligible for a license. Nor does Goldstein indicate what would occur if a local exchange carrier was not interested in a reserved license or if the local exchange carrier decided to subsequently sell the license for a profit. Thus, in addition to statutory infirmities, both proposals raise some of the same policy concerns the Commission encountered in prior licensing regimes, *i.e.*, comparative hearings or lotteries.⁵⁴

25. As explained below, we are adopting a geographic area licensing scheme that permits the filing of mutually exclusive applications.⁵⁵ Accordingly, pursuant to Section 309(j) of the Communications Act and Sections 3002(b), (c)(1)(D), and (c)(3) of the Balanced Budget Act of 1997, we must resolve mutually exclusive applications for licenses in these bands through competitive bidding.⁵⁶ We will address the particular competitive bidding rules in a subsequent section.⁵⁷

26. While initial licenses for this spectrum will be assigned through competitive bidding, it also will be possible for entities to acquire spectrum in these bands through such post-auction mechanisms as disaggregation and partitioning and secondary markets.⁵⁸ In our recently released *Secondary Markets Report and Order*, we took action to remove unnecessary regulatory barriers to the development of secondary markets.⁵⁹ We adopted new policies and procedures that enable most wireless licensees, including Part 27 licensees, to lease some or all of their spectrum usage rights to

⁵³ We note that adoption of the assignment mechanisms suggested by Mizelle and Goldstein would require an amendment to Section 309(j) of the Communications Act.

⁵⁴ The comparative hearing process was complex and often led to proceedings that substantially delayed the award of licenses. *See, e.g., Ranger Cellular and Miller Communications, Inc. v. FCC*, 2003 WL 21495159, 1 (D.C. Cir. July 1, 2003) ("*Ranger*") (citations omitted); *see also* Implementation of Section 309(j) of the Communications Act – Competitive Bidding, *Second Report and Order*, 9 FCC Rcd 2348, 2359 ¶ 64 (1994) (finding that comparative hearings are lengthy, contentious and complex). Lotteries, by contrast, did not compare applicants' qualifications, and sometimes resulted in the disqualification of the winner, necessitating a new lottery and raising the concern about lottery winners being unjustly enriched. *Ranger*, at 1; *see also* Reexamination of the Comparative Standards for Noncommercial Educational Applicants, *Report and Order*, 15 FCC Rcd 7386, 7391 ¶¶ 13, 14 (2000). The disadvantages of these two systems were recognized in a 1993 report by the House Committee on Energy and Commerce, which stated that, "in many respects the FCC's current licensing methods for assigning spectrum have not served the public interest." H.R. Rep. No. 111, 103d Cong., 1st Sess. 248 (1993), reprinted in 1993 U.S.C.C.A.N. 378 at 575, 580.

⁵⁵ *See infra* ¶ 30-34.

⁵⁶ 47 U.S.C. § 309(j); Balanced Budget Act of 1997, Pub. L. No. 105-33, 111 Stat. 251. § 3002(b), (c)(1)(D), (c)(3)).

⁵⁷ *See infra* ¶¶ 136-149.

⁵⁸ *See infra* ¶¶ 80-82 (discussing disaggregation and partitioning).

⁵⁹ Promoting Efficient Use of Spectrum Through Elimination of Barriers to the Development of Secondary Markets, *Report and Order and Further Notice of Proposed Rulemaking*, WT Docket No. 00-230, FCC 03-113 (rel. Oct. 6, 2003) (*Secondary Markets Report and Order*).

third-party spectrum lessees.⁶⁰ The spectrum leasing policies established in that proceeding will be applied to the new AWS services established in this proceeding in the same manner that those policies apply to other Part 27 services (with the exception of Guard Band Manager licensing which has its own set of spectrum leasing policies and rules), and all other exclusive use Wireless Radio Services.⁶¹ The flexible policies adopted in that proceeding and with respect to the AWS bands will allow more entities access to the AWS spectrum and permit the marketplace to decide what use is made of this spectrum.

B. Band Plan

27. *Background:* In the *AWS Service Rules NPRM*, we proposed to license the 1710-1755 and 2110-2155 MHz bands using a geographic area licensing scheme (instead of station-defined site-by-site licensing) and sought comment on this proposal. In addition, we sought comment on the related issue of what size geographic licensing area or areas should be used to license this spectrum. We asked whether nationwide, regional, local, or some combination of these approaches should be used to license this spectrum. We also sought comment on the amount of spectrum that should be included in each license, and the associated issue of whether the spectrum should be paired.

28. *Discussion:* We adopt a geographic area licensing approach to license spectrum in the 1710-1755 and 2110-2155 MHz bands. This approach will use both regional and localized service areas. We will employ symmetrically paired spectrum blocks with the pairings being comprised of different bandwidths. In total, we will make available 946 licenses for spectrum in the 1710-1755 and 2110-2155 MHz bands. The table below summarizes our band plan for these two bands.

<u>Blocks</u>	<u>Pairings</u>	<u>Amount</u>	<u>Area</u>	<u>Licenses</u>
A	1710-1720 and 2110-2120	2x10	EA	176
B	1720-1730 and 2120-2130	2x10	REAG	12 ⁶²
C	1730-1735 and 2130-2135	2x5	REAG	12
D	1735-1740 and 2135-2140	2x5	RSA/MSA	734
E	1740-1755 and 2140-2155	2x15	REAG	12

29. We believe this band plan best implements the auction objectives and other guidance set forth in section 309(j), and also best comports with the record evidence regarding likely uses of this spectrum. Of course, bidders will be able to aggregate (*i.e.*, acquire multiple) licenses during the auction. In addition, after the licenses are awarded, licensees may engage in a variety of secondary market transactions (*i.e.*, aggregation, disaggregation, partitioning, or spectrum leasing). Therefore, if we have specified license dimensions that do not directly meet the needs of certain auction applicants, the secondary market will provide them with the opportunity to acquire the geographic and bandwidth footprints required to implement their business plans. As we note in the Competitive Bidding section of this Report and Order, the Wireless Telecommunications Bureau ("WTB"), consistent with statutory obligations,⁶³ will seek comment on auction-related procedural issues,

⁶⁰ *Id.* at ¶ 84.

⁶¹ *Id.*

⁶² Of the 12 REAGs, the first six cover the continental United States and the other six cover smaller areas (*i.e.*, Alaska, Hawaii, the islands, and the Gulf of Mexico). 47 C.F.R. § 27.6(a)(1).

⁶³ See 47 U.S.C. § 309(j)(3)(E)(i) (obligation to permit notice and comment on proposed auction procedures before issuance of bidding rules).

including auction design, prior to the start of the AWS auction pursuant to WTB's existing delegated authority.⁶⁴ This will provide WTB with an opportunity to weigh the benefits and disadvantages of any particular bidding design, prior to the start of the auction.

1. Geographic Area Licensing

30. We will license the 1710-1755 and 2110-2155 MHz bands using geographic area licensing. The record supports this decision with only one commenter voicing concern with this approach. None of the commenters advocate site-by-site licensing. CTIA states that it "strongly supports the Commission's proposal to adopt a geographic area -- rather than a site-by-site -- licensing scheme for the AWS bands."⁶⁵ Cingular observes that "[g]eographic area licensing is especially beneficial where spectrum is likely to be used for services, such as CMRS, that require ubiquity and mobility over wide areas."⁶⁶ AT&T Wireless asserts that "the AWS spectrum should be licensed on a geographic area basis."⁶⁷ Ericsson states that it supports geographic area licensing.⁶⁸ Other commenters implicitly agree that geographic area licensing should be used to license these bands because their comments address what size geographic areas should be used to license this spectrum.⁶⁹

31. Our experience has been that geographic area licensing offers many advantages over site-by-site licensing for the types of services expected in these bands. It affords licensees substantial flexibility to respond to market demand, which results in significant improvements in spectrum utilization. In particular, geographic area licensing permits economies of scale because it allows licensees to coordinate usage across an entire geographic area to maximize the use of spectrum. It also reduces regulatory burdens and transaction costs, because licensees do not require site-by-site approval and can aggregate their service territories without incurring the administrative costs and delays associated with site-by-site licensing. This is especially advantageous where spectrum is likely to be used for services that require ubiquity and mobility over wide areas. As a result, licensees can more rapidly roll out their services, which was our experience with PCS.

32. In addition, as noted above, section 3002 of the Balanced Budget Act of 1997 requires the Commission to assign licenses for the majority of the 1710-1755 and 2110-2155 MHz spectrum through competitive bidding.⁷⁰ A geographic licensing scheme is likely to result in the acceptance of mutually exclusive license applications, which under section 309(j) must be assigned through

⁶⁴ See 47 C.F.R. §§ 0.131(c) (functions of WTB); 0.331 (authority delegated to WTB); 0.332 (actions taken under WTB's delegated authority); 1.2103 (competitive bidding design options, including simultaneous multi-round and combinatorial bidding auctions, among others); 1.2104 (competitive bidding mechanisms). See also Amendment of Part 1 of the Commission's rules—Competitive Bidding Procedures, Order, Memorandum Opinion and Order, and Notice of Proposed Rule Making, 12 FCC Rcd 5686, 5697-98 ¶ 16 (1997). See, e.g., Auction of Regional Narrowband PCS Licenses Scheduled for September 24, 2003, Comment Sought on Package Bidding Procedures, Reserve Prices or Minimum Opening Bids, and Other Auction Procedures, 18 FCC Rcd 6366 (2003).

⁶⁵ CTIA Comments at 5.

⁶⁶ Cingular Reply Comments at 9.

⁶⁷ AT&T Wireless Comments at 1.

⁶⁸ Ericsson Comments at 3.

⁶⁹ See Motorola Comments at 6; RCA Comments at 2-4; U.S. Cellular Comments at 3-8; Verizon Wireless Comments at 8-10; Cingular Reply Comments at 9; TDD Coalition Reply Comments at 7.

⁷⁰ See *supra* ¶ 24.

competitive bidding. Accordingly, a geographic area licensing scheme serves the Commission's statutory obligation to assign licenses for the majority of these bands through competitive bidding. For this additional reason, therefore, we will use a geographic area licensing scheme for this spectrum.

33. The National Radio Astronomy Observatory (NRAO) opposes the use of geographic area licensing for the 1710-1755 and 2110-2155 MHz bands to the extent that such licensing would permit AWS fixed stations to operate within the National Radio Quiet Zone without prior coordination.⁷¹ NRAO requests that the 1718.8-1722.2 MHz band remain available for radio astronomy use outside the National Radio Quiet Zone and that this spectrum not be made available for use by AWS.

34. The Commission has long recognized the National Radio Quiet Zone in its rules. Specifically, applicants and licensees planning to construct and operate a new or modified station at a permanent fixed location within a 13,000 square mile rectangular area must coordinate with the NRAO site located at Green Bank, West Virginia and the Naval Radio Research Observatory (NRRO) located at Sugar Grove, West Virginia.⁷² We find that the requirement to protect NRAO and NRRO is in no way compromised by our adoption of geographic area licensing for AWS because Section 1.924 applies to applicants and licensees regardless of whether they are licensed on a site-by-site or geographical area basis. With regard to the other radio astronomy observatories listed in footnote US311 of section 2.106, we note that RAS facilities located outside the National Radio Quiet Zone observe in the band 1718.8-1722.2 MHz on an unprotected basis.⁷³ We continue to believe that this status is appropriate for these facilities.⁷⁴ Therefore, we will not adopt formal coordination procedures to protect these RAS observatories. Where practicable, we do, however, recommend that AWS licensees make reasonable efforts to avoid the use of frequencies at stations in the fixed and mobile services that could interfere with the RAS observatories listed in footnote US311.

2. Size of Geographic Areas

35. In order to meet competing needs and to provide maximum flexibility, we will license the 1710-1755 and 2110-2155 MHz bands using a range of geographic licensing areas. These include large regional licensing areas, smaller regional licensing areas, and local licensing areas. The approach we adopt will foster service to rural areas⁷⁵ and tribal lands, and will promote investment in and rapid deployment of new technologies and services.⁷⁶ By including these varied-sized geographic licensing areas in our band plan for this spectrum, we promote the policy goal of disseminating licenses among a wide variety of applicants.⁷⁷ The record in this proceeding supports this approach. While some of the commenters request that this spectrum be licensed using nationwide or large regional geographic licensing areas,⁷⁸ others request smaller localized licensing areas,⁷⁹ and still

⁷¹ See NRAO Comments at 9.

⁷² See 47 C.F.R. § 1.924(a).

⁷³ See 47 C.F.R. § 2.106, footnote US311. Greenbank is listed in footnote US311 as means of reminding applicants and licensees of its existence. However, this listing does not alter the requirement for AWS licensees to comply with 47 C.F.R. § 1.924(a).

⁷⁴ See, e.g., *AWS Allocation Order*, 17 FCC Rcd at 23205 ¶ 25.

⁷⁵ See 47 U.S.C. § 309(j)(3)(A).

⁷⁶ See 47 U.S.C. § 309(j)(4)(C)(iii).

⁷⁷ See 47 U.S.C. § 309(j)(3)(B), (4)(C).

⁷⁸ Verizon Wireless Comments at 8-10.

others request a combination of large and small geographic licensing areas.⁸⁰ We believe that there is enough spectrum available in these two bands to accommodate the competing need for both large and small geographic licensing areas and that by including these varied-sized areas in our band plan for this spectrum we are providing carriers with the flexibility to tailor their licensing areas to meet their individual business needs and goals.

36. Offering the three geographic license sizes we have chosen will implement the objectives of section 309(j) given the record before us. Offering only a single, large geographic license size would not meet the needs of many prospective bidders and could lead to post-auction disaggregation and partitioning costs. On the other hand, offering only small geographic licenses intended to be used as building blocks would in effect impose unneeded, excess aggregation costs (either during an auction or in post-auction secondary transactions). However, specifying three different geographic sizes will best directly meet the various expressed needs of prospective entrants. It will also best meet the needs of incumbents who have varying spectrum positions today and likely varying needs for added spectrum. However, we have also chosen our license definitions so that if they do not directly meet the needs of bidders, then combining them is facilitated.

37. Economic Areas (EAs) and Regional Economic Area Groupings (REAGs) are related to each other.⁸¹ EAs can be aggregated to form REAGs. As a result of being related to each other, EAs and REAGs can be combined to form specific service territories or existing service providers can acquire a licensing area in order to supplement their existing spectrum capacity. MSAs and RSAs, however, cannot be combined to form EAs because several MSAs/RSAs cross EA borders. These licensing areas can either be acquired through the competitive bidding process, or through post-auction, secondary market mechanisms (e.g., partitioning and disaggregation, leasing, etc.). Either way, the licensing areas we have chosen will allow licensees to make adjustments to suit their individual needs.

38. By utilizing REAGs, we meet the needs of those carriers interested in creating regional or nationwide service territories.⁸² For instance, a carrier interested in providing this type of service could combine the REAGs to create a nationwide service territory. Alternatively, a REAG could be combined with geographically related EA or MSA to create a regional service area with aggregated spectrum. In addition, an existing service provider could choose to increase its spectrum capacity by acquiring a REAG or acquire EAs in particular areas where it has a need for additional capacity. These types of large licensing areas permit carriers to take advantage of economies of scale and they allow service providers greater flexibility in the build-out of their services, since they are less constrained by geographical license limits. These types of licensing areas also require less coordination because there are fewer adjacent licensees.

39. While some carriers may desire regional or nationwide service territories, others are interested in localized service areas. Our band plan meets this need by including licensing areas based on MSAs and RSAs.⁸³ These local service areas will be optimal for incumbent operators who may

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⁷⁹ ATT Wireless Comments at 4; RCA Comments at 2-4; TDD Coalition Reply Comments at 7.

⁸⁰ CTIA Comments at 5-7; U.S. Cellular Comments at 3-8; Cingular Reply Comments at 8-9.

⁸¹ See 47 C.F.R. § 27.6.

⁸² See, e.g., CTIA Comments at 6; U.S. Cellular Comments at 5-8; Verizon Wireless Comments at 8.

⁸³ MSAs and RSAs are collectively referred to as Cellular Market Areas (CMAs). MSAs and RSAs were originally used to license cellular service. 47 C.F.R. § 22.909. They have more recently been refined and used for (continued....)

need spectrum capacity only in limited areas. These local service areas also favor smaller entities, such as rural telephone companies and small service providers, with localized business plans and no interest in providing large-area service. As RCA observes, MSAs and RSAs permit entities who are only interested in serving rural areas to acquire spectrum licenses for these areas alone and avoid acquiring spectrum licenses with high population densities that make purchase of license rights too expensive for these types of entities.⁸⁴ These types of service providers could acquire a RSA and create a new service area or they could expand an existing service territory or supplement the spectrum they are licensed to operate in by adding a RSA. They could also combine a few MSAs and RSAs to create a larger but localized service territory. MSAs and RSAs allow entities to mix and match rural and urban areas according to their business plans. By being smaller, these types of geographic service areas provide entry opportunities for smaller carriers, new entrants, and rural telephone companies. Their inclusion in our band plan will foster service to rural areas and tribal lands and thereby bring the benefits of advanced services to these areas.⁸⁵

40. API and PetroCom assert that the Gulf of Mexico should be licensed as a separate service area or areas.⁸⁶ PetroCom states that "[t]he Commission should separately license one or more service areas to cover the Gulf rather than including the Gulf as part of larger land based service areas."⁸⁷ PetroCom is concerned that if the Gulf is included in a land based service area the licensee of that service area could meet its coverage requirements without providing service to the Gulf.⁸⁸ We have addressed the issue of licensing the Gulf of Mexico in other proceedings and we will follow established policy on this issue. Consistent with API's and PetroCom's request and with established policy, for Blocks A, B, C, D, and E we will separately license the Gulf of Mexico as EA licensing area 176,⁸⁹ REAG licensing area 12,⁹⁰ and MSA licensing area 306.⁹¹ As we did in licensing other Part 27 services, the Gulf of Mexico service area is comprised of the water area of the Gulf of Mexico starting 12 nautical miles from the U.S. Gulf coast and extending outward.⁹²

3. Spectrum Blocks and Pairing

41. We will license the 1710-1755 and 2110-2155 MHz bands using symmetrically paired spectrum blocks of five, ten, and fifteen megahertz. Most of the commenters support licensing this

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licensing the lower 700 MHz band. 47 C.F.R. § 27.6(c)(2). For purposes of the 1710-1755 and 2110-2155 MHz bands, we will use the same MSAs and RSAs used for licensing the lower 700 MHz band.

⁸⁴ RCA Comments at 2-3; *see also* U.S. Cellular Comments at 5-7.

⁸⁵ While we did not receive any comments from Tribal governments, we remain interested in ensuring that the communication needs of these communities are met. *See AWS Service Rules NPRM*, 17 FCC Rcd at 24146-47 ¶ 25; *see also* Statement of Policy on Establishing a Government-to-Government Relationship with Indian Tribes, *Policy Statement*, 16 FCC Rcd 4078 (2000).

⁸⁶ API Comments at 8; PetroCom Comments at 3-5.

⁸⁷ PetroCom Comments at 3.

⁸⁸ *Id.* at 4.

⁸⁹ *See* 47 C.F.R. § 27.6(a)(1).

⁹⁰ *See id.*

⁹¹ *See* 47 C.F.R. § 27.6(c)(2)(ii).

⁹² 47 C.F.R. § 27.6(a)(2) and (c)(2)(ii).

spectrum using spectrum blocks of five, ten, or fifteen megahertz.⁹³ No one advocates licensing this spectrum using spectrum blocks smaller than five megahertz and none argue for spectrum blocks larger than 15 megahertz. Most of the commenters advocate licensing this spectrum using symmetrically paired 10 and 15 megahertz blocks.⁹⁴ Two commenters advocate licensing this spectrum using unpaired spectrum.⁹⁵

42. As with our approach to geographic areas, our approach here is to offer multiple bandwidth amounts in order to enable the various efficient uses of the spectrum suggested by the record without, in so far as possible, requiring substantial aggregation during an auction or substantial secondary market transactions. Also as with our approach to geographic dimension, however, we have chosen bandwidth dimension and arrangement to facilitate aggregation during the auction, should individual bidders in fact find that valuable. This flexibility will allow carriers to tailor their acquisition of spectrum in these bands to meet their individual business plans and it will allow market forces rather than the Commission to ultimately determine how this spectrum is licensed.

43. Along with allowing licensees to tailor their acquisition of licenses to meet their individual business plans, our spectrum block arrangement provides licensees with maximum flexibility to resolve adjacent band interference issues and issues related to the relocation of existing licensees in the 1710-1755 and 2110-2155 MHz bands.⁹⁶ By placing the larger 10 and 15 megahertz blocks at either end of the two bands, licensees in these segments will have sufficient bandwidth and maximum flexibility to resolve adjacent band interference concerns. In addition, by placing the smaller blocks toward the middle of these two bands, we have made aggregation easier. Our band plan allows licensees to acquire spectrum in a manner that takes into account existing incumbents in these bands and accommodates their eventual relocation out of these bands.

44. The record in this proceeding indicates that a bandwidth of at least five megahertz is required to accommodate all of the 3G radio interfaces.⁹⁷ Five megahertz blocks can be used for new technologies and can be used for some data services, including Internet access. Paired five megahertz blocks enable a single wideband CDMA channel, which is sufficient to provide some forms of Internet access. Five megahertz blocks also provide entry opportunities for small and rural service providers. The larger ten and fifteen megahertz blocks should enable a broader range of broadband services, including Internet access at faster speeds. These larger blocks should also accommodate future, higher data rates, and provide operators with additional capacity, and, importantly, with greater flexibility. The larger blocks should also be of interest to those service providers contemplating a large regional or nationwide service. We believe that the availability of blocks of different sizes will allow operators to better accommodate their needs, particularly the capacity they need to serve and the mix of services (e.g., data/voice) they may wish to offer.

⁹³ AT&T Wireless Comments at 7; CTIA Comments at 4-5; Ericsson Comments at 4; Lucent Comments at 2; Motorola Comments at 6; Nokia Comments at 2; RCA Comments at 4; U.S. Cellular Comments at 3; Verizon Wireless Comments at 10; Cingular Reply Comments at 8.

⁹⁴ Cf. Goldstein Comments at 1-3 (advocating blocks of 6.5 megahertz, 5.625 megahertz, and five megahertz).

⁹⁵ ArrayComm Reply Comments at 2-4; TDD Coalition Reply Comments at 8, 15.

⁹⁶ See Verizon Wireless Comments at 5-7.

⁹⁷ Lucent Comments at 2. Worldwide spectrum for advanced wireless services have not been licensed using anything less than five megahertz blocks.

45. In the *AWS Service Rules NPRM*, we noted that most carriers in the U.S. have indicated plans to provide service that meets the IMT-2000 data rates by deploying systems based on CDMA2000 and W-CDMA technologies.⁹⁸ The record in this proceeding supports this observation.⁹⁹ CDMA2000 and W-CDMA technologies employ a frequency division duplex (FDD) transmission mode that requires a paired-channel architecture and operates in symmetric paired blocks of spectrum. FDD is the most commonly used transmission procedure for PCS, cellular, and other mobile telephony applications and the record indicates it is the technology most likely to be employed in this spectrum. As a result, we will license all of the spectrum in the 1710-1755 and 2110-2155 MHz bands using symmetrically paired spectrum blocks.

46. Our band plan does not include unpaired spectrum that might be suitable for use by entities interested in using time division duplexing (TDD) transmissions. The TDD Coalition asserts that unpaired five megahertz blocks could be used by small carriers to offer wireless local area network (WLAN)-type products.¹⁰⁰ While we remain committed to allowing new and innovative technologies to develop in this spectrum, there are certain technical constraints that do not allow us at this time to include unpaired spectrum in our band plan for this spectrum that might be suitable for TDD.¹⁰¹ We note that if proponents of TDD can conclusively demonstrate that portions of this spectrum could be used for such transmissions without causing interference to Federal government users or other licensees, we could revisit this issue at a future date. In the meantime, we will make every effort to provide spectrum opportunities for TDD systems in future allocation and spectrum proceedings, such as in the *AWS Allocation* proceeding.¹⁰² Our commitment to finding additional spectrum for TDD is supported by our decisions to allocate unpaired spectrum in the 1670-1675 MHz band and the lower 700 MHz band.¹⁰³

C. Band Clearance and Reimbursement

47. As we explained in the *AWS Service Rules NPRM*, the 1710-1755 MHz band, the 2110-2150 MHz band, and the 2150-2155 MHz band each have incumbents who will be covered by different clearance and reimbursement plans. As detailed below, the reimbursement plan for the

⁹⁸ *AWS Service Rules NPRM*, 17 FCC Rcd at 24148 ¶ 30.

⁹⁹ AT&T Wireless Comments at 7-8; CTIA Comments at 4-5; Ericsson Comments at 4-5; Goldstein Comments at 2-3; Lucent Comments at 1-3; Motorola Comments at 5; Nokia Comments at 1-2; Cingular Reply Comments at 8.

¹⁰⁰ TDD Coalition Reply Comments at 22; *see also* ArrayComm Comments at 2.

¹⁰¹ *See infra* ¶¶ 104-111.

¹⁰² *See* Amendment of Part 2 of the Commission's Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, Including Third Generation Wireless Systems, ET Docket No. 00-258, *Third Report and Order, Third Notice of Proposed Rulemaking and Second Memorandum Opinion and Order*, 18 FCC Rcd 2223 (2003). We note that among other alternatives, one possible way this might be accomplished is by creating spectrum blocks that are unpaired but appropriately spaced so that they are also suitable for paired use, and then auctioning using a package bidding design. This could effectively allow bidders desiring unpaired spectrum to bid for licenses on that basis, while others could bid on a package that pairs the spectrum. The result could be an effective market test that determines whether FDD or TDD is the highest valued use.

¹⁰³ *See* 47 C.F.R. §§ 27.5(c)(2), 27.5(f).

2110-2150 MHz band was addressed in the *AWS Allocation Order*.¹⁰⁴ Further, we note that the clearance and reimbursement plans for the other portions of the AWS bands will not be resolved in this order. Accordingly, potential applicants and other interested parties are strongly encouraged to monitor the separate proceedings and legislative proposals discussed below. Finally, as explained below, while we conclude that the public interest supports adopting final service rules before all relocation issues have been resolved, we are not deciding the timing for licensing or auctions in this order.¹⁰⁵

1. The 1710-1755 MHz Band

48. *Background:* The transfer of the 1710-1755 MHz band from Federal Government use to non-Government commercial use is subject to the provisions of the National Telecommunications and Information Administration Organization Act,¹⁰⁶ as amended by the Strom Thurmond National Defense Authorization Act for Fiscal Year 1999 (NDAA-99).¹⁰⁷ NDAA-99 requires new non-Government licensees to reimburse Federal users for their relocation costs.¹⁰⁸ NDAA-99 requires Federal users to notify NTIA prior to auction of the "marginal costs anticipated to be associated with such relocation or with modifications necessary to accommodate prospective licensees."¹⁰⁹ NTIA is directed, in turn, to provide such cost information to the Commission so that it can make such information available to potential auction applicants.¹¹⁰ A Federal user retains its primary status until

¹⁰⁴ *AWS Allocation Order*, 17 FCC Rcd at 23213-15 ¶¶ 42-46 (also noting that certain fixed microwave incumbents in the 2130-2150 MHz band segment consist of links that are paired with frequencies in the 2180-2200 MHz band allocated to MSS).

¹⁰⁵ The Wireless Telecommunications Bureau, consistent with statutory obligations will determine the timing for licensing and auctions pursuant to its delegated authority. See 47 U.S.C. § 309(j)(3)(E)(i)(ii); 47 C.F.R. §§ 0.131(c) (functions of WTB); 0.331 (authority delegated to WTB); 0.332 (actions taken under WTB's delegated authority); 1.2103 (competitive bidding design options, including simultaneous multi-round and combinatorial bidding auctions, among others); 1.2104 (competitive bidding mechanisms); see also Amendment of Part 1 of the Commission's rules—Competitive Bidding Procedures, *Order, Memorandum Opinion and Order, and Notice of Proposed Rule Making*, 12 FCC Rcd 5686, 5697-98 ¶ 16 (1997).

¹⁰⁶ Pub. L. 102-538, 106 Stat. 3533 (1992).

¹⁰⁷ Pub. L. 105-261, 112 Stat. 1920 (1999), as codified at 47 U.S.C. § 923(g) (section 923(g)(1)(F) specifically notes that the 1710-1755 MHz band is subject to NDAA-99); see 47 C.F.R. § 301.10(a)(iii) (notes that the 1710-1755 MHz band is subject to the reimbursement rules promulgated by NTIA pursuant to NDAA-99).

¹⁰⁸ 47 U.S.C. § 923(g)(1)(A) ("[a]ny person on whose behalf a Federal entity incurs costs . . . shall compensate the Federal entity in advance for such costs. Such compensation may take the form of a cash payment or in-kind compensation."). We note that NTIA previously provided a summary of the Federal incumbents in the 1710-1755 MHz band. *NTIA AWS Assessment* at 1-2.

¹⁰⁹ 47 U.S.C. § 923(g)(1)(A). Previously, NTIA issued a report estimating the costs of relocation for Federal operations in the 1710-1755 MHz band to alternate frequency bands. NTIA's Special Publication 01-46, *The Potential for Accommodating Third Generation Mobile Systems in the 1710-1850 MHz Band: Federal Operations, Relocation Costs, and Operational Impacts - Final Report*, at 5-1 – 5-13 (Mar. 2001) (*NTIA AWS Report*). NTIA has stated that the final cost estimates for the 1710-1755 MHz band may differ from prior estimates based upon the receipt of additional data. *NTIA AWS Assessment* at 8.

¹¹⁰ 47 U.S.C. § 923(g)(1)(A); 47 C.F.R. § 301.110 (NTIA shall provide the Federal entity's estimated marginal cost information to the Commission at least 180 days prior to the date on which the auction is scheduled to commence).

relocation is complete and NTIA limits or terminates the Federal user's operating license.¹¹¹ NDAA-99 also grants the Federal user a limited right to reclaim spectrum.¹¹² We note, however, that the Department of Commerce has proposed legislation to change the reimbursement process by creating a relocation fund using auction proceeds ("relocation trust fund").¹¹³

49. Pursuant to NDAA-99's direction, NTIA adopted rules governing the reimbursement process.¹¹⁴ The *NTIA Reimbursement Order*, however, did not adopt rules that would allow for the sharing of relocation costs where more than one licensee benefits from the relocation of the federal incumbents.¹¹⁵

50. *Discussion:* As noted above, although this Order will not directly address the existing reimbursement scheme and other band clearance issues, we received a comment directly related to these issues. Specifically, RCA requests that the Commission develop dispute resolution procedures when parties cannot agree on relocation cost or timing issues.¹¹⁶ In support of its request, RCA asserts that incumbents must not be permitted to impede use of the 1710-1755 MHz band by unreasonable reimbursement demands or delay.¹¹⁷ We note, however, that with respect to Federal incumbents, the

¹¹¹ 47 U.S.C. § 923(g)(2); *Mandatory Reimbursement Rules for Frequency Band or Geographic Relocation of Federal Spectrum-Dependent Systems*, Department of Commerce, National Telecommunications and Information Administration, 67 Fed. Reg. 41182, 41184 ¶ 18 (June 17, 2002) (*NTIA Reimbursement Order*); *AWS Service Rules NPRM*, 17 FCC Rcd at 24149 ¶ 33. We also note that not all Federal incumbents in the 1710-1755 MHz band are required to relocate. Exempt entities, however, may voluntarily relocate and negotiate relocation costs in the same manner as non-exempt entities. *Id.* at 41186 ¶¶ 34-35; see also *AWS Allocation NPRM*, 16 FCC Rcd 596, 613 ¶ 40, 650-653 App. E and F (providing information regarding exempt entities).

¹¹² 47 U.S.C. § 923(g)(3) ("If within one year after the relocation the Federal entity demonstrates to the Commission that the new facilities or spectrum are not comparable to the facilities or spectrum from which the Federal Government station was relocated," the new licensee "shall take reasonable steps to remedy any defects or pay the Federal entity for the expenses incurred in returning the Federal Government station to the spectrum from which such station was relocated"); see also *AWS Service Rules NPRM*, 17 FCC Rcd at 24149 ¶ 33.

¹¹³ U.S. Department of Commerce, National Telecommunications and Information Administration, "Commerce Department Asks Congress to Create Spectrum Relocation Fund for Federal Agencies Whose Spectrum Is Reallocated to Commercial Use," NTIA Press Release, July 23, 2002 (available at <http://www.ntia.doc.gov/ntiahome/press/2002/relocationfund7242002.htm>). The proposed legislation is available on the NTIA Web site at <http://www.ntia.doc.gov/ntiahome/congress/2002/legistransmittal7232002.htm>; see also <http://www.ntia.doc.gov/ntiahome/congress/2003/spectrum0319.htm> // legistransmittal7232002.htm. Commenters generally support the proposed legislation to change the reimbursement process through the use of a relocation trust fund. See, e.g., CTIA Comments at 16; Ericsson Comments at 3; Motorola Comments at 9; and Motorola Reply Comments at 13-14. In addition, some commenters suggest that the relocation trust fund proposal should be expanded to pay for the relocation of incumbents in the other AWS bands at issue here. RCA Comments at 8. Other commenters urge the Commission to oppose proposals to use auction proceeds for alternative purposes. AT&T Wireless Reply Comments at 5, referencing, among others, CTIA Comments at iii, 15-16; Ericsson Comments at 3; Motorola Comments at 9-10; RCA Comments at 7-8.

¹¹⁴ 47 U.S.C. § 923(g)(1)(A); *NTIA Reimbursement Order*, 67 Fed. Reg. at 41186 ¶¶ 34-35.

¹¹⁵ *NTIA Reimbursement Order*, 67 Fed. Reg. at 41188 ¶ 46 (NTIA stated that through a further Notice of Proposed Rulemaking, it would develop a cost-sharing plan and seek proposals for a clearinghouse or some other mechanism for administering a cost-sharing plan).

¹¹⁶ RCA Comments at 8.

¹¹⁷ *Id.*

reimbursement procedures, including dispute resolution, are governed by rules adopted by NTIA in the *NTIA Reimbursement Order*.¹¹⁸

51. Some commenters also request that the release of a final order in this proceeding should not occur until there is finality as to the relocation and reimbursement plan for Federal incumbents.¹¹⁹ Alternatively, if the Commission does not delay release of this order pending conclusion of the related proceedings, other commenters request that the Commission note that, until comparable spectrum is allocated for Federal incumbents, the 1710-1755 MHz band will be significantly encumbered by Federal operations.¹²⁰ While we are sympathetic to the concerns expressed by the commenters regarding the uncertainties relating to the reimbursement scheme that will finally be implemented, delay in adopting the band plan and service rules will not serve to expedite resolution of those issues. Further, delay in the adoption of service and competitive bidding rules could serve to delay the eventual deployment of AWS spectrum. Moreover, by taking this substantial step toward the goal of full deployment of AWS spectrum, we increase the likelihood that potential applicants and others with an interest in the AWS bands will work to ensure that the reimbursement and relocation process is expedited.¹²¹ Thus, our action here should facilitate resolution of the relocation and reimbursement process.¹²² With respect to the request to note significant incumbency in the 1710-1755 MHz band, as noted above, Federal incumbents retain their primary status until relocation is complete and NTIA limits or terminates the Federal incumbent's operating license.¹²³

2. The 2110-2150 MHz Band

52. *Background:* The *AWS Allocation Order* specified that those incumbents in the 2110-2150 MHz band who have primary status would be entitled to compensation for relocation under policies based on the *Emerging Technologies* proceeding.¹²⁴ Specifically, we noted that these

¹¹⁸ *NTIA Reimbursement Order*, 67 Fed. Reg. 41182 at ¶ 66 (adopting a requirement for non-binding arbitration where parties have not reached agreement after the negotiation/mediation period), 47 C.F.R. §§ 301.120, 301.130.

¹¹⁹ NTIA Comments at 3 (arguing that release of a final order in this proceeding should occur simultaneously with the release of a final order regarding allocation actions for comparable relocation spectrum for Federal incumbents); Verizon Wireless Comments at 7 ("it would be premature to adopt spectrum-clearing rules until the Commission has given Congress sufficient time to enact a Spectrum Relocation Fund").

¹²⁰ NTIA Comments at 3, n.4; *see also* TDD Reply Comments at 16 (supporting NTIA's position).

¹²¹ *See* Service Rules for the 746-764 and 776-794 MHz Bands, and Revisions to Part 27 of the Commission's Rules, Carriage of the Transmissions of Digital Television Broadcast Stations, Review of the Commission's Rules and Policies Affecting the Conversion to Digital Television, *Memorandum Opinion and Order and Further Notice of Proposed Rulemaking*, 15 FCC Rcd 20845, 20865, ¶50, ¶53 (acknowledging the benefits of voluntary agreements to assist in band clearing).

¹²² We note, however, that once the final reimbursement and band clearance schemes for all portions of the AWS bands are finalized, if we believe it appropriate to modify the rules adopted here, we will do so in a separate order.

¹²³ *See supra* ¶ 48 and n.111; *AWS Allocation Order*, 17 FCC Rcd at 23197-98 ¶ 8.

¹²⁴ *AWS Allocation Order*, 17 FCC Rcd at 23213 ¶ 42; *AWS Allocation NPRM*, 16 FCC Rcd at 618 ¶ 54 n.102; *see also* Redevelopment of Spectrum to Encourage Innovation in the Use of New Telecommunications Technologies, ET Docket No. 92-9, *First Report and Order and Third Notice of Proposed Rule Making*, 7 FCC Rcd 6886 (1992). In the *Emerging Technologies* proceeding, we allowed new entrants to provide incumbents with comparable facilities using any acceptable technology. *Emerging Technologies Third R&O*, 8 FCC Rcd 6589, 6591, 6603 ¶¶ 5, 36 (1993). Under this policy, incumbents must be provided with replacement facilities that allow them to (continued....)

incumbents are entitled to compensation for relocation of any links that may pose an interference threat to new fixed or mobile system licensees, including all engineering, equipment, site, and Commission fees.¹²⁵ We note that certain fixed microwave incumbents in the 2130-2150 MHz band segment consist of links that are paired with frequencies in the 2180-2200 MHz band allocated and licensed to MSS. The relocation and reimbursement obligations of these paired segments was discussed and resolved in the *AWS Allocation Order*.¹²⁶

53. *Discussion:* As noted above, although this Order will not directly address the reimbursement and band clearance issues regarding 2110-2150 MHz band, we received some comments directly addressing such issues.¹²⁷ In addition, one commenter, RCA, requests that certain information be provided to auction applicants regarding 2110-2155 MHz band incumbents prior to auction. Specifically, RCA requests that information regarding all incumbent licensees in the 2110-2155 MHz band and maximum reimbursement liability of the new licensees should be disclosed to potential auction applicants not less than 90 days prior to the deadline for submission of the FCC Form 175 ("short-form application") for any AWS auction.¹²⁸ In support of its request, RCA states that interested parties need sufficient time to develop business plans, and knowledge of relocation costs and related timing issues are important components of those plans.¹²⁹ RCA also requests the Commission to determine the maximum reimbursement payable to non-Federal incumbents.¹³⁰ API opposes both requests.¹³¹ With respect to the disclosure of information regarding the incumbents, API argues that there is already a wealth of pertinent information regarding fixed service incumbent licensees in the 2.1 GHz band and potential auction applicants may access such information via the Commission's Universal Licensing System ("ULS") and other licensing databases.¹³² Thus, API argues that RCA's request would unnecessarily and unfairly shift auction participants' burden of due

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maintain the same service in terms of throughput, reliability and operating costs. See, e.g., 47 C.F.R. § 101.91.

¹²⁵ *AWS Allocation Order*, 17 FCC Rcd at 23213-15 ¶¶ 42-46; *AWS Allocation NPRM*, 16 FCC Rcd at 618 ¶¶ 54-55.

¹²⁶ *AWS Allocation Order*, 17 FCC Rcd at 23213-15 ¶¶ 42-46.

¹²⁷ For example, API requests that the Commission resolve petitions for reconsideration and/or clarification of the Commission's *Second Report and Order* in ET Docket No. 95-18 and restates its concerns in the comments filed in this proceeding. API Comments at 4 -6 (referencing the Joint Petition for Clarification and Reconsideration, filed by the Fixed Wireless Communications Coalition, the Critical Infrastructure Communications Coalition, API, the Association of American Railroads, the Association of Public Safety Communications Officials International, Inc. and the United Telecom Council, in ET Docket No. 95-18 on September 6, 2000); see also PCIA Comments at 1 (proposing the establishment of a band-clearing cost-sharing clearinghouse for the 2110-2150 MHz band to facilitate the relocation of point-to-point microwave incumbents and also proposing the amendment of section 101.99 to allow a cost sharing among all licensees that benefit from the same path clearance). PCIA's comments on a cost-sharing clearinghouse mirror points subsequently made in a February 24, 2003 Petition for Partial Reconsideration of the *AWS Allocation Order*. PCIA Petition for Partial Reconsideration in ET Docket No. 00-258, filed February 24, 2003.

¹²⁸ RCA Comments at 7-8 (requesting information regarding all incumbent licensees in the 2110-2155 MHz band and maximum reimbursement liability of the new licensees).

¹²⁹ RCA Comments at 8.

¹³⁰ *Id.* at 7.

¹³¹ API Reply Comments at 4-5.

¹³² *Id.* at 2-4.

diligence to incumbent licensees. API also argues that a pre-auction determination of the maximum reimbursement would unfairly cap incumbents' costs.¹³³

54. We deny RCA's request to have incumbents provide auction applicants with additional information. Our action here is consistent with our actions in prior proceedings.¹³⁴ For example, we denied the request of a Mobile Satellite Service ("MSS") provider that urged the Commission to collect extensive technical, operational, and equipment inventory data from fixed service incumbents in the 2 GHz band so that MSS operators could better assess the cost of relocating such incumbents.¹³⁵ In support of its decision, the Commission stated, "enough information is currently available, both in our databases and from commercial sources, to permit sufficient estimates [of relocation costs] for business planning."¹³⁶ While we recognize that the due diligence burden on auction applicants in encumbered services is not inconsequential, we concur with API in that it would be inequitable to shift the burden of due diligence onto the incumbents. Further, as we stated in the MSS proceeding, we believe that there is sufficient information currently available to permit sufficient estimates of relocation costs by potential auction applicants.¹³⁷ Similarly, we believe that a Commission determination of maximum reimbursement liability prior to auction would be contrary to the policy favoring negotiation adopted in the *Emerging Technologies* proceeding.¹³⁸ Further, such pre-auction determination may inject unnecessary administrative delay to any auction because incumbents or interested parties might dispute the Commission's determination of maximum reimbursement liability.¹³⁹

3. The 2150-2155 MHz Band

55. *Background:* In the *AWS Allocation Order*, we reallocated 5 megahertz at 2150-2155 to the AWS service from MDS but deferred to a later proceeding issues relating to MDS licensees, including the disposition of the remaining MDS spectrum and identification of replacement spectrum and relocation procedures.¹⁴⁰ Subsequently, we adopted a *Third Notice of Proposed Rulemaking* in

¹³³ *Id.* at 4-5.

¹³⁴ Amendment of Section 2.106 of the Commission's Rules to Allocate Spectrum at 2 GHz for Use by the Mobile-Satellite Service, ET Docket No. 95-18, *Second Report and Order and Second Memorandum Opinion and Order*, 15 FCC Rcd 12315, at ¶¶ 114-121 (2000) ("*MSS Second Report and Order*").

¹³⁵ *MSS Second Report and Order* at ¶ 119.

¹³⁶ *Id.* at ¶ 120.

¹³⁷ Relevant information regarding incumbents can be found in the Commission's databases, including our Universal Licensing System. In contrast, certain information regarding unclassified Federal incumbents will only be available after NTIA provides such information to the Commission prior to auction. 47 C.F.R. § 301.110 (b) (detailing the type of information to be provided). We note, however, that for sensitive or classified assignments such information will not be available prior to the auction. For those assignments, the auction winner or new licensee can only have access to classified information after obtaining the required security clearances, consistent with the National Industrial Security Program Operating Manual. 47 C.F.R. § 301.110 (c) and (d).

¹³⁸ *AWS Allocation Order* at ¶¶ 44-46. See also 47 C.F.R. § 101.99 (c) (capping the reimbursement obligation for a subsequent new entrant where the initial new entrant relocates a paired link of a microwave incumbent).

¹³⁹ 47 U.S.C. § 309(j)(3)(A) (providing that the Commission shall seek to promote the development and rapid deployment of new technologies, products, and services for the benefit of the public without administrative or judicial delays).

¹⁴⁰ *AWS Allocation Order*, 17 FCC Rcd at 23214 ¶ 41; *AWS Service Rules NPRM*, 17 FCC Rcd at 24150 ¶ 35.

ET Docket No. 00-258¹⁴¹ that, among other things, proposed that if relocation were deemed necessary,¹⁴² MDS incumbents would be entitled to comparable facilities or adequate replacement spectrum.¹⁴³ In the *Third Notice of Proposed Rulemaking*, we also asked for a suggested timeframe for clearing the band, the types and magnitude of costs that would be involved,¹⁴⁴ and the amount and location of spectrum needed to relocate MDS operations at 2150-2160/2162 MHz. In particular, we sought to minimize disruption to existing services and to minimize the economic impact on MDS licensees providing those services.

56. *Discussion:* As noted above, although this Order will not directly address the reimbursement and band clearance issues regarding 2150-2155 MHz band, we received one comment related to these issues. Specifically, WCAI requests that the Commission resolve the pending proceedings relating to MDS channels 1 & 2/2A (occupying the 2150-2160/2162 MHz band)¹⁴⁵ at one time.¹⁴⁶ Consistent with our decision above, we determine that the public interest is best served by proceeding with the adoption of service and competitive bidding rules for all portions of the AWS band.

D. Licensing and Operational Rules

1. Regulatory Status

57. *Background:* In the *AWS Service Rules NPRM*, we observed that Part 27 licensees may render any kind of communications service consistent with the regulatory status indicated in its license and with the Commission's rules applicable to that service.¹⁴⁷ In this case, we indicated that

¹⁴¹ Amendment of Part 2 of the Commission's Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, including Third Generation Wireless Systems, ET Docket No. 00-258, *Third Report and Order, Third Notice of Proposed Rulemaking and Second Memorandum Opinion and Order*, 18 FCC Rcd 2223 (2003) (*Third Notice of Proposed Rulemaking*).

¹⁴² Under our relocation policies only stations with primary status are entitled to relocation. *Third Notice of Proposed Rulemaking*, 18 FCC Rcd at 2256-57 ¶ 72. Because secondary operations, by definition, cannot cause harmful interference to primary operations, new entrants are not required to relocate secondary operations. *Id.*; 47 C.F.R. § 2.105(c)(2). Before the adoption of the *AWS Allocation Order*, the 2150-2160 MHz band was allocated domestically to the Fixed Service on a primary basis. *Third Notice of Proposed Rulemaking*, 18 FCC Rcd at 2253-54 ¶ 66. As previously stated, MDS stations licensed after 1992 to use the 2160-2162 MHz band are on a secondary basis. We also note that our relocation policies do not dictate that systems be relocated to spectrum-based facilities or even to the same amount of spectrum as they currently use, only that comparable facilities be provided. *See, e.g.*, Amendment of Section 2.106 of the Commission's Rules to Allocate Spectrum at 2 GHz for Use by the Mobile-Satellite Service, ET Docket No. 95-18, *Second Report and Order and Second Memorandum Opinion and Order*, 15 FCC Rcd 12315 (2000).

¹⁴³ *Second R&O*, 16 FCC Rcd at 16061 ¶ 40; *Third Notice of Proposed Rulemaking*, 18 FCC Rcd at 2256 ¶ 71. This would be similar to the approach followed in the *Emerging Technologies* proceeding.

¹⁴⁴ *Third Notice of Proposed Rulemaking*, 18 FCC Rcd at 2256 at ¶¶ 71-72.

¹⁴⁵ MDS licensees may operate in the 2160-2162 MHz band only in the country's top 50 markets. *See supra* n.6.

¹⁴⁶ WCAI defines the related proceedings as including those that address reallocating additional spectrum for AWS, relocating incumbent licensees displaced by AWS to comparable spectrum, reallocating spectrum in the 1990-2000/2020-2052/2165-2180 MHz band from MSS for AWS or displaced incumbents, allowing MSS licensees to utilize their remaining spectrum for an ancillary terrestrial component (ATC), and imposing service rules on AWS and ATC operations. WCAI Comments at 1-2.

¹⁴⁷ *AWS Service Rules NPRM*, 17 FCC Rcd at 24150-51 ¶ 36.